

IN THE CLAIMS

Claim 1 (Currently Amended): An apparatus comprising:

a host controller; and
a host controller driver,

wherein a plurality of banks containing a plurality of queue element transfer descriptors (qTDs) are created for a plurality of buffers posted to the host controller driver, and the qTDs are circularly linked, and at least one qTD of the plurality of qTDs operates to store overflow content of at least one in a first buffer of the plurality of buffers when execution of the contents of the first buffer is completed without a short packet condition when a size of the contents in the first buffer is greater than a storage capacity in a first bank of the plurality of banks.

Claim 2 (Original): The apparatus of claim 1, wherein the host controller is an enhanced host controller interface (EHCI) host controller.

Claim 3 (Original): The apparatus of claim 1, wherein the banks are associated with a particular buffer in the plurality of buffers.

Claim 4 (Original): The apparatus of claim 3, wherein the plurality of buffers are ordered in an incremented order.

Claim 5 (Original): The apparatus of claim 4, wherein a second buffer is executed upon an occurrence of a short packet in a first qTD associated with a first buffer, the first qTD having an alternate next pointer pointing to a first qTD of the second buffer.

Claim 6 (Original): The apparatus of claim 1, wherein a next pointer in each of the plurality of qTDs in a first bank point to a next qTD in the first bank, a last qTD in the first bank points to a first qTD in the first bank.

Claim 7 (Currently Amended): An apparatus comprising:

a host controller; and
a host controller driver coupled to the host controller,

wherein the host controller arranges queue element transfer descriptors (qTDs) in a circularly linked order, and at least one qTD operates to store overflow content of at least one in a first buffer of a plurality of buffers when execution of the contents of the first buffer is completed without a short packet condition when a size of the contents in the first buffer is greater than a storage capacity in a first bank of the plurality of banks.

Claim 8 (Original): The apparatus of claim 7, wherein a plurality of banks containing a plurality of qTDs are created for the plurality of buffers posted to the host controller driver.

Claim 9 (Original): The apparatus of claim 7, wherein the host controller is an enhanced host controller interface (EHCI) host controller.

Claim 10 (Original): The apparatus of claim 8, wherein the banks are associated with a particular buffer in the plurality of buffers.

Claim 11 (Original): The apparatus of claim 10, wherein a second buffer is executed upon an occurrence of a short packet in a first qTD associated with a first buffer, the first qTD having an alternate next pointer pointing to a first qTD of the second buffer.

Claim 12 (Original): The apparatus of claim 8, wherein a next pointer in each of the plurality of qTDs in a first bank point to a next qTD in the first bank, a last qTD in the first bank points to a first qTD in the first bank.

Claim 13 (Currently Amended): A system comprising:
a bus;
a first host controller coupled to the bus; and
a second host controller coupled to the first host controller;
wherein the first host controller arranges queue element transfer descriptors (qTDs) in a circularly linked order and at least one qTD operates to store overflow content of at least one in a first buffer of a plurality of buffers when execution of the contents of the first buffer is completed without a short packet condition when a size of the contents in the first buffer is greater than a storage capacity in a first bank of the plurality of banks.

Claim 14 (Original): The system of claim 13, wherein a plurality of banks containing a plurality of qTDs are created for the plurality of buffers posted to a host controller driver.

Claim 15 (Original): The system of claim 13, wherein the first host controller is an enhanced host controller interface (EHCI) host controller.

Claim 16 (Original): The system of claim 14, wherein the banks are associated with a particular buffer in the plurality of buffers.

Claim 17 (Original): The system of claim 16, wherein a second buffer is executed upon an occurrence of a short packet in a first qTD associated with a first buffer, the first qTD having an alternate next pointer pointing to a first qTD of the second buffer.

Claim 18 (Original): The system of claim 13, wherein a next pointer in each of the plurality of qTDs in a first bank point to a next qTD in the first bank, a last qTD in the first bank points to a first qTD in the first bank.